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36. A method of carrying out submerged gel electrophoresis of a mixture of molecules having, respectively, larger and smaller molecular sizes as claimed in claim 32 wherein said substantially simultaneous gelation and reaction between said polysaccharide and said cross linker is carried out in a solvent comprising water.

37. A method of carrying out submerged gel electrophoresis of a mixture of molecules having, respectively, larger and smaller molecular sizes as claimed in claim 32 wherein said substantially simultaneous gelation and reaction between

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said polysaccharide and said cross linker is carried out in a solvent comprising a mixture of water and an organic solvent.

38. A method of carrying out submerged gel electrophoresis of a mixture of molecules having, respectively, larger and smaller molecular sizes as claimed in claim 21 wherein said cross linker is at least one member selected from the group consisting of dihaloalkyl alcohols, halohydrins, bisepoxides, divinyl sulfone, alkanediol dialkyl sulfonates, and alkanediol diaryl sulfonates.

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